WHAT IS CLAIMED IS:

1.   In a network including a router and an optical cross-connect system (OXC), a method for responding to a failure, the method comprising:

detecting the failure by the router;

sending a signal from the router to the OXC, wherein the signal indicates the failure and causes the OXC to connect a protection port to a working port; and

transmitting data from the router to the OXC over the protection port.

2.   The method of claim 1, wherein the sending further comprises the step of sending an in-band signal to the OXC.

3.   The method of claim 2, wherein the sending an in-band signal to the OXC further comprises the sending a Synchronous Optical Network (SONET) signal to the OXC.

4.   The method of claim 1, wherein the sending further comprises sending an out-of-band signal to the OXC.

5.   The method of claim 4, wherein the sending an out-of-band signal comprises the step of addressing the out-of-band signal to an Internet Protocol address associated with the OXC.

6.   A method for responding to a failure in a network including a router and an optical cross-connect system (OXC), the method comprising:

receiving a signal at the OXC from the router, the signal indicating the failure; and

connecting a protection port of the router to a working port of the OCXC.

7.   The method of claim 6, wherein the receiving further comprises receiving an in-band signal at the OXC.

8.   The method of claim 7, wherein the step of receiving an in-band signal at the OXC comprises the step of receiving a Synchronous Optical Network (SONET) signal at the OXC.

9.   The method of claim 6, wherein the receiving further comprises receiving an out-of-band signal at OXC.

10.   The method of claim 9, wherein the receiving an out-of-band signal further comprises addressing the out-of-band signal to an Internet Protocol address associated with the OXC.

11.   An optical cross-connect system comprising:
        a spare port for transmitting low priority data from router; and
        a working port for transmitting high priority data from a primary router, the working port connectable to the router responsive to a failure of the primary router.

12.   The optical cross-connection system of claim 11, wherein the working port is connectable to the router responsive to receiving an in-band signal from the backup router.

13.   The optical cross connection system of claim 12, wherein the working port is connectable to the router responsive to receiving a Synchronous Optical Network (SONET) signal from the router.

14.   The optical cross-connection system of claim 11, wherein the working port is connectable to the router responsive to receiving an out-of-band signal from the router.

15.   A communications network for transmitting data, the communication network comprising:
        a router for receiving the data from a terminal, the router comprising:
                a working port for receiving the data from the terminal; and

a protection port for receiving the data from the terminal, responsive to a failure of the working port; and

an optical cross-connect system (OXC) for receiving the data from the router, the optical cross-connect system comprising a working port, the working port connectable to the protection port, responsive to the failure of the working port of the router.

16.   The communications network of claim 15, wherein the router transmits a signal indicating the failure to the OXC, the signal causing the OXC to connect the protection port to the working port of the OXC.

17.   The communications network of claim 16, wherein the signal is an in-band signal.

18.   The communications network of claim 17, wherein the in-band signal is a Synchronous Optical Network (SONET) signal.

19.   The communications network of claim 16, wherein the signal is an out-of-band signal.

20.   The communications network of claim 19, wherein the out-of-band signal is addressed to an Internet Protocol address associated with the OXC.